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ABSTRACT

The components of school satisfaction among eighth graders as measured by the Student Opinion Poll (SOP) and the relationships of these components with various achievement and ability scores were determined through factor analysis. Four components of school satisfaction were interpretable in meaningful terms: teacher student relationships, student peer relationships, subject matter difficulty, and subject matter interest. Knowledge of this four dimensional attitude space provided information about the achievement-attitude relationship which was contrary to previous findings in the area. For example, school satisfaction should be considered in terms of the specific components; schools should not attribute student satisfaction to personality alone; and, finally, certain components of school satisfaction are significantly related to achievement and ability and do significantly increase the multiple correlation between ability and achievement. Further research is needed to better define the nature of these school satisfaction components and to discover their antecedents. (Author/PR)

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Achievement and Ability Correlates of Components of School Attitude Among Eighth Grade Students

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Previous studies of school attitude using modifications of the Student Opinion Poll concluded that student attitude toward school is associated with psychological health but not with achievement or ability. For example, Jackson and Getzels (1959) concluded that "dissatisfaction with school appears to be part of a larger picture of psychological discontent rather than a direct reflection of inefficient functioning in the classroom [p. 299]." Subsequent studies using the Student Opinion Poll in its original or modified form resulted in similar conclusions (Auria & Chapline, 1967; Auria, Cullen, & Frankiewicz, 1969; Brodie, 1963, 1964; Jackson & Lahaderne, 1967; Spillman, 1959).

Each of the above studies considered school satisfaction to be unidimensional and used a single global score to represent a student's attitude toward school. Yet, some studies (Jackson and Getzels, 1959; Getzels & Jackson; 1962) indicate the school satisfaction as measured by the Student Opinion Poll may more fruitfully be seen as multi-dimensional. In fact, a recent study by Auria and Frankiewicz (1967) identified several factors of

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satisfaction via a factor analysis of responses to the Student Opinion Poll.

The present study attempted to determine through factor analysis the components of school satisfaction among eighth grade students and to investigate the relationships of these components with various achievement and ability scores.

Procedures

Data for this study were collected from a sample of 372 eighth grade students at one junior high school of a large northeastern Ohio city. A breakdown of the sample by sex, race, and socio-economic status is given in Table 1.

The major instrument used to assess student attitudes toward school was the Junior High School Student Opinion Poll (SOP). School marks in grades seven and eight, standardized achievement and ability data (Ohio Survey Tests), and personal information for each student were obtained from school records.

Findings

The 57-item SOP was administered to the 372 eighth grade students. Responses to the multiple-choice items of the Student Opinion Poll were classified as reflecting either satisfaction or dissatisfaction. The subsequent response matrix consisted of 372 rows of dichotomous entries, each of length 57 from which interitem correlations were determined. This intercorrelation matrix was factored by an interative procedure in which R^2 was the initial communality estimate. Inspection of the initial factor solution indicated the final number of factors to be included in the orthogonal rotation.

This procedure yielded four components of school satisfaction which were interpretable in meaningful academic terms. For each component, a brief description and two items with relatively high loadings on the component are given.

Component A: Teacher, Teacher-Student. Most of the sixteen items in this component are manifestly concerned with teacher behavior, both in teaching and in interacting with students. Two samples items are:

> The ability of the teachers in this school to present new material seems to be (very good, good, average, poor).
>
> When students need special attention, teachers in this school are (always ready to help, generally ready to help, ready to help if given special notice, ready to help only in extreme cases).

Component B: Student-Peer. The fifteen items in this component are concerned primarily with student-peer relations. This component includes items which deal with the student as an individual as well as a member of a group. Two sample items are:

> In my opinion, student interest in social activities, such as clubs, scouts, and the "Y" is (too great, about right, too little).
>
> Students from different types of homes and backgrounds get along together in this school (very well, about average, not very well, very badly).

Component C: Subject Matter Difficulty. This factor is a subject matter difficulty component. The nine items included in this component deal with feelings about difficulty of subjects, amount of material covered, and grading practices. Two sample items are:

> In general, subjects taught are (too easy, about right in difficulty, too difficult).
>
> As preparation for next year, the program of this school is (too tough, about right, too easy).

Component D: Subject Matter Interest. This nine-item component is concerned with subject matter interest and acceptability. Two sample items are:

> Most of the subjects taught in this school are (very interesting, above average in interest, below average in interest, dull and uninteresting).
>
> In this school, subject matter includes (too many things that are not useful to us now, too many things that are useful to us now but not later, both things that are useful now and can be used later).

Results

To assess whether the factor analysis of the SOP better defined the relationships between school attitudes and school achievement, the factor-analytically derived subscales were correlated with school grades and with standardized measures of achievement and ability. Component correlations with school marks are given in Table 2. Component B, Student-Peer, was not significantly correlated with the school marks received by the eighth grade students in the eight subject matter areas. Component A, Teacher, Teacher-Student, Component C, Subject Matter Difficulty, and Component D, Subject Matter Interest were significantly positively correlated (.05 level) with the school achievement marks (three exceptions are noted: grade eight vocational subjects with Component C and grade seven music and physical education with Component D). The highest correlations with school achievement marks were consistently found with the Teacher, Teacher-Student Component. Contrary to the findings of most previous studies of school satisfaction, these results indicate that certain components of school satisfaction are associated with classroom effectiveness.

Approximately the same results were found when relating the components of school satisfaction to the attitude marks assigned by teachers (see Table 3).

Component correlations with standardized ability and achievement test scores are given in Table 4. The relationships of school marks and standardized achievement scores with the components of school satisfaction are basically the same. As indicated by previous research, school satisfaction is more highly correlated with school marks than with standardized achievement scores.

The correlations between the components of school satisfaction and the Ohio Survey Tests achievement scores indicate that the Student-Peer Component and the Subject Matter Interest Component were not significantly correlated with the standardized achievement marks (one exception is noted: Vocabulary for Component D). The Teacher, Teacher-Student Component was significantly correlated with standardized test scores for Vocabulary, Factual Reading, Capitalization and Punctuation, and Mathematics. The Subject Matter Difficulty Component was significantly correlated with all the standardized achievement tests. The Student-Peer and Subject Matter Interest Components were not significantly correlated with the Ohio Survey Tests (OST) ability scores. However, the Teacher, Teacher-Student and Subject Matter Difficulty Components were significantly correlated with the OST ability scores.

Multiple correlations of components of school satisfaction and ability test scores for predicting school marks and standardized achievement are given in Table 5. Although ability scores account

for the major amount of the predictive variance, prediction of school marks and standardized achievement scores is improved by adding the school-satisfaction component scores. Interestingly, different components add uniquely to the prediction of school marks than those adding to the prediction of standardized achievement scores.

Discussion

The present study found school achievement marks in language arts, history, mathematics, science, and art to be consistently and significantly correlated with the Teacher, Teacher-Student, Subject Matter Difficulty, and Subject Matter Interest Components but not with the Student-Peer Component. It also found that the Teacher, Teacher-Student and Subject Matter Difficulty components were significantly related to standardized ability and achievement scores. Thus, knowledge of the four dimensional attitude space provided information about the achievement-attitude relationship which was contrary to previous findings in this area. The fact that previous studies failed to find consistent achievement-satisfaction relationships was probably due to their use of a single, global measure of school satisfaction.

These findings argue that school satisfaction should be considered in terms of specific referents (teachers, peers, subject matter difficulty, and subject matter interest). Furthermore, schools should not attribute student satisfaction or dissatisfaction with school to personality alone, but must recognize that certain components of school satisfaction are associated with success and/or failure in the classroom and test performance.

Obviously, any interpretations of this study must take into account such limitations as restricted sampling and the use of a paper-and-pencil measure of attitude. Yet, the findings do indicate that certain components of school satisfaction are meaningfully related to achievement and ability and do significantly increase the multiple correlation between ability and achievement. Further research is needed to better define the nature of these school satisfaction components and to discover their antecidents.

TABLE 1

Breakdown of Sample by Sex, Race,

and Socio-Economic Status

(N = 372)

Group	Percent of Sample
Boys	52
Girls	48
Total	100
Black	38
White	62
Total	100
Lower SES	48
Middle SES	52
Total	100
Black-Lower SES-Boys	11
Black-Lower SES-Girls	15
Black-Lower SES-Boys	5
Black-Lower SES-Girls	5
White-Lower SES-Boys	11
White-Lower SES-Girls	9
White-Middle SES-Boys	24
White-Middle SES-Girls	20
Total	100

TABLE 2

Correlations[a] of Student Opinion Poll Subscale Scores with Achievement Marks for Eighth Grade Students While in Grades Seven and Eight (N = 372)

(Decimal points omitted)

Subject	Grade	A	B	C	D
Language Arts	7	30	-05	20	17
	8	35	-02	27	28
History	7	32	02	20	19
	8	25	-08	20	13
Mathematics	7	33	-02	17	19
	8	38	-06	27	23
Science	7	32	-01	22	15
	8	35	-02	26	17
Art	7	35	-02	23	14
	8	29	08	18	18
Vocational Subjects[b]	7	25	00	14	15
	8	20	00	09	15
Music	7	19	-10	15	10
	8	35	-05	23	23
Physical Education	7	16	05	15	10
	8	26	04	23	18

[a]Coefficients of .14 are significant at the .01 level and coefficients of .11 are significant at the .05 level.

[b]Either home economics or industrial arts.

TABLE 3

Intercorrelations[a] of Student Opinion Poll Subscale Scores with School Attitude Marks for Eighth Grade Students While in Grades Seven and Eight (N = 372)

(Decimal points omitted)

Subject	Grade	A	B	C	D
Language Arts	7	-25	02	-12	-13
	8	-31	03	-23	-20
History	7	-13	03	-09	-13
	8	-20	03	-15	-17
Mathematics	7	-21	-03	-10	-19
	8	-26	04	-20	-20
Science	7	-26	00	-08	-12
	8	-33	-03	-18	-18
Art	7	-23	04	-21	-15
	8	-23	-03	-14	-19
Vocational Subjects[b]	7	-18	03	-12	-10
	8	-14	04	-10	-10
Music	7	-18	04	-17	-11
	8	-36	02	-29	-26
Physical Education	7	-22	03	-15	-17
	8	-23	04	-21	-17

[a]Coefficients of .14 are significant at the .01 level and coefficients of .11 are significant at the .05 level.

[b]Either home economics or industrial arts.

TABLE 4

Correlations[a] of Ohio Survey Tests Ability and Achievement Scores with Subscale Scores for Student Opinion Poll (N = 372)

OST Scores	A	B	C	D
Ability				
Verbal	.23	-.08	.17	.04
Mathematical	.23	-.08	.15	.07
Achievement				
Vocabulary	.23	.02	.25	.13
Factual Reading	.14	.00	.15	.08
Interpretive Reading	.10	.01	.11	.06
Spelling	.08	.03	.11	.02
Effectiveness of Expression	.06	.03	.11	.01
Grammar & Usage	.10	.05	.12	.03
Capitalization & Punctuation	.13	.05	.14	.06
Mathematics	.21	-.01	.14	.08

[a]Coefficients of .14 are significant at the .01 level and coefficients of .11 are significant at the .05 level.

TABLE 5

Multiple Correlation Coefficients in Multiple Regression Analysis of OST Achievement Scores and School Marks with Ability and Components-of-School-Satisfaction Scores (N = 372)

Criterion	Step	Predictor	R	F(DIFF)
OST Reading Achievement	1	OST Ability Total	.797**	
	2	Subject Matter Difficulty	.811**	24.26**
OST English Expression	1	OST Ability Total	.756**	
	2	Subject Matter Difficulty	.772**	23.06**
OST Mathematics	1	OST Ability Total	.734**	
	2	Student-Peer	.736**	3.45*
Language Arts	1	OST Ability Total	.505**	
	2	Subject Matter Interest	.569**	37.35**
	3	Teacher	.573**	2.81*
	4	Student-Peer	.581**	4.64**
Mathematics	1	OST Ability Total	.652**	
	2	Teacher	.686**	31.86**
	3	Student-Peer	.693**	6.60**
	4	Subject Matter Interest	.700**	7.15**
Science	1	OST Ability Total	.704**	
	2	Teacher	.724**	22.22**

*Significant at the .05 level.
**Significant at the .01 level.

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